LMSC B030129
COPY 2 OF 5

JOINT MESSAGEFORM

SECURITY CLASSIFICATION [redacted]

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LXVII

19-7-749

PRECEDENCE	TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
ACTION	BOOK	MULTI	SINGLE			
INFO						

FROM:
6595TH AEROSPACE TEST WING, VANDENBERG AFB, CALIF., VWZD

SPECIAL INSTRUCTIONS

[redacted]

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

TO:
SPACE SYSTEMS DIV, LOSA CALIF.

SUBJECT: EIGHT-HOUR FLASH REPORT

I. SUMMARY

A VEHICLE CONSISTING OF SLV-2 BOOSTER NO. 388 AND S-01A ORBITAL STAGE NO. 1412 WAS LAUNCHED ON THE SECOND ATTEMPT FROM VAFB COMPLEX 75-1, PAD 1, AT 17:00:10.58 PDT ON 18 JULY 1963. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE S-01A SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT, WAS ACCOMPLISHED. THE VTS RADAR PLOTBOARD INDICATED THE FOLLOWING APPROXIMATE INJECTION CONDITIONS: ALTITUDE 137 STATUTE MILES; PAD REFERENCED VELOCITY, 25,580 FPS; ELEVATION FLIGHT PATH ANGLE, APPROXIMATELY +1.0 DEG; AZIMUTH FLIGHT PATH ANGLE, APPROXIMATELY 174.5 DEG. THE ORBITAL PERIOD APPEARS TO BE NEAR-NOMINAL, BASED ON FIRST PASS ACQUISITION

DATE	TIME
19	1000Z
MONTH	YEAR
JUL	63

WRITER

SYMBOL

TYPED NAME AND TITLE (Signature, if required)
Maj. F. L. Wright, USAF

PHONE 866-3771 | PAGE NR. 1 | NR. OF PAGES

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RELEASER

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DD FORM 1 MAY 55 173 REPLACES DD FORM 172, 1 OCT 49, WHICH WILL BE USED UNTIL EXHAUSTED

DURING ASCENT, THE FOLLOWING WERE OBSERVED FROM TELEMETRY DATA:

[redacted]

DURING SEPARATION, AN ELECTRICAL DISTURBANCE (HIGH CURRENT DRAIN) WITHIN THE S-01A PERSISTED FOR 3.4 SEC, AND LINK A SIGNAL WAS LOST FOR THE REMAINDER OF THE ASCENT.

II. SIGNIFICANT EVENTS

PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF (1700:10.58 PDT)	ZERO
STEERING INITIATED	92.00 SEC
MECO (S1)	145.32 SEC
VECO	154.19 SEC
ENABLE D1 AND D2 (S2)	150.59 SEC
D1 ON	153.31 SEC
D1 OFF	154.75 SEC
D2 ON	154.87 SEC
D2 OFF	159.93 SEC
SEPARATION COMMAND (S3)	160.35 SEC
SEPARATION COMPLETE	162.6 SEC
ULLAGE ROCKET IGNITION	178.8 SEC
S-01A ENGINE IGNITION	188.8 SEC

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FROM:

6595TH AEROSPACE TEST WING, VANDENBERG AFB, CALIF.

S-01A THRUST ATTAINMENT (90 PER CENT PC) 189.9 SEC

S-01A BURNOUT (70 PER CENT PC) (S.T.=437.25) 426.7 SEC

S-01A LINK 2 TELEMETRY LOSS 160.4 SEC

VTS VERLORT RADAR FADE 448. SEC

VTS ACQUISITION BEACON FADE 468 SEC

VTS TELEMETRY DATA FADE (LINK 1) 475 SEC

III. SLV-2 PERFORMANCE

ALL SLV-2 SUB-SYSTEMS PERFORMED ADEQUATELY FOR ACHIEVEMENT OF THE PRIMARY TEST OBJECTIVES. HOWEVER CERTAIN UNUSUAL CHARACTERISTICS WERE OBSERVED DURING THE LATTER PORTION OF THE BOOSTER THRUST PERIOD.

(A) FUEL AND LOX FLOAT SWITCH ACTUATIONS WERE OSCILLATORY RATHER THAN EXHIBITING THE USUAL SINGLE ACTUATION.

(B) Y AXIS ACCELEROMETER INDICATED LARGER AMPLITUDE OSCILLATIONS DURING THE 20 CYCLE OSCILLATORY PERIOD AS COMPARED WITH PREVIOUS LAUNCHES.

QUICK-LOOK DATA INDICATE THAT ACCEPTABLE BOOSTER COAST APOGEE CONDITIONS WERE ATTAINED AND APPROPRIATE COMMANDS WERE PROVIDED TO THE S-01A. THE TENTATIVE EVALUATION OF COAST APOGEE VELOCITY WAS 19971 FPS (NOMINAL: 9934 FPS) AND OF ALTITUDE WAS 106.65 NM (NOMINAL: 106.28 NM).

SIGNATURE [redacted] | PAGE NO. 3 | NR OF PAGES | SECURITY CLASSIFICATION [redacted] | INITIALS

DD FORM 1 MAY 55 173-1

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FROM:

6595TH AEROSPACE TEST WING, VANDENBERG AFB, CALIF.

THESE NOMINALS, BASED ON TAG ENGINE DATA, ANTICIPATED MECO DUE TO PROPELLANT DEPLTION. GROUND GUIDANCE SYSTEM TARGET WAS COAST APOGEE VELOCITY OF 9971 FPS AND ALTITUDE OF 106.85 NM.

IV. S-01A PERFORMANCE

ALL S-01A VEHICLE SUB-SYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE TRAJECTORY CONDITIONS FOR ORBITAL INJECTION AT ENGINE SHUTDOWN.

THE 28 VDC CURRENT AND UNREGULATED VOLTAGE MONITORS INDICATE THE EXISTENCE OF AN ELECTRICAL SHORT FOR 3.42 SEC FROM 160.39 SEC TO 163.81 SEC. THE INITIATION OF THE SHORT CLOSELY COINCIDES WITH THE START OF SEPARATION HOWEVER THE SHORT EXTENDS FOR 1.21 SEC BEYOND SEPARATION COMPLETE. THE CURRENT MONITOR INDICATES A RISE FROM 19 AMPS TO 41 AMPS FOR 0.2 SEC AT THE START OF THE SHORT AND THEN GOES OUT OF BAND (GREATER THAN 50 AMPS) FOLLOWED BY AN ABRUPT RECOVERY TO 21 AMPS AT THE END OF THE SHORT. THE PLUS 28 VDC UNREGULATED BUS SHOWS A DROP OF APPROXIMATELY 4.0 VDC FROM 26.3 VDC TO 22.3 VDC FOLLOWED BY A GRADUAL INCREASE TO 23.3 VDC JUST BEFORE RECOVERY. POWER CONVERSION AND REGULATION EQUIPMENT DISTURBANCE WERE MINOR.

SYMBOL | PAGE NR 4 | NR OF PAGES | SECURITY [redacted] | INITIALS

DD FORM 1 MAY 65 173-1

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THE SHORT DOES NOT APPEAR TO HAVE AFFECTED ANY OF THE BASIC VEHICLE SUBSYSTEMS, HOWEVER LINK 2 TELEMETER WAS LOST AT THE START OF THE SHORT. INITIATION OF PNEUMATIC CONTROL AND OPERATION DURING AND FOLLOWING THE SHORT APPEARS NORMAL. [redacted] ALSO NOTED WAS A BRIEF CURRENT SURGE AT 172.22 SEC WHICH APPEARS UNRELATED TO ANY KNOWN EVENT AND THE USUAL ELEVATED CURRENT VALUES FROM THRUST ATTAINMENT TO ULLAGE ROCKET BURNOUT. EXCEPT FOR THESE PERIODS ALL ELECTRICAL SUBSYSTEM EQUIPMENT APPEARS TO HAVE OPERATED SATISFACTORILY THROUGH SIGNAL FADE.

AT THE TIME OF TELEMETRY SIGNAL FADE AT VTS, THE ORBITAL TIMER WAS SET AT 3450 SEC (STEP 20) IN THE RESET-ON POSITION, IN THE INCREASE MODE, AND ALTERNATE RE-ENTRY DISARM STATE.

V. SPACE-GROUND COMMUNICATIONS

TELEMETRY DATA FROM LINK 1 WAS SATISFACTORILY RECEIVED AND RECORDED.

LINK 2 SIGNAL STRENGTH WAS NOMINAL FROM LIFTOFF TO T+160.4 SEC AT WHICH TIME A COMPLETE LOSS OF SIGNAL WAS EXPERIENCED. LINK 2 WAS NOT RECOVERED AT ANY TIME

THEREAFTER DURING ASCENT, AND WAS CONFIRMED BY KODI AS BEING INACTIVE ON PASS 1.

VI. COUNTDOWN

LAUNCH WAS ACCOMPLISHED ON THE SECOND ATTEMPT. THE FINAL COUNTDOWN WAS INITIATED AT 0840 PDT ON 18 JULY 1963 AND PROCEEDED TO LIFTOFF AT THE BEGINNING OF THE SCHEDULED LAUNCH TIME "WINDOW". NO HOLDS WERE IMPOSED.

A MODIFIED TASK 2 OPERATION WAS PERFORMED BECAUSE THE VEHICLE WAS VERTICAL AT THE BEGINNING OF THE COUNTDOWN. S-01A POWER CHECKS WHICH ARE NORMALLY CONDUCTED IN TASK 2 WERE PERFORMED IN TASK 6.

FOLLOWING THE NORMAL CHECKS OF TASK 10 A SPECIAL PAYLOAD CHECK WAS PERFORMED FOR ADDITIONAL VERIFICATION OF THE INTEGRITY OF THE PAYLOAD.

THE FIRST COUNTDOWN WAS INITIATED AT 0840 PDT ON 17 JULY 1963 AND WAS ABORTED IN TASK 9 AT 1445 DUE TO A FAILURE OF THE SLV2 NUMBER 2 DESTRUCT RECEIVER TO FUNCTION PROPERLY. A SATISFACTORY REPLACEMENT WAS INSTALLED PRIOR TO THE FINAL COUNTDOWN. ALSO IN TASK 9, THE S-01A GUIDANCE GAS HIGH-RANGE PRESSURE

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TRANSDUCER WAS REPORTED TO BE INOPERATIVE, THE REQUIREMENT FOR THIS MANDATORY MEASUREMENT WAS WAIVED BY THE AIR FORCE. THE TRANSDUCER WAS NOT REPAIRED BEFORE START OF THE FINAL COUNTDOWN. NO PROPELLANTS HAD BEEN LOADED ABOARD THE VEHICLE AT TIME OF THE ABORT. THE VEHICLE WAS MAINTAINED IN VERTICAL POSITION OVERNIGHT.

VII. AEROSPACE GROUND EQUIPMENT

THE AEROSPACE GROUND EQUIPMENT PERFORMED SATISFACTORILY TO SUPPORT CHECKOUT AND LAUNCH OF THE VEHICLE. NO SIGNIFICANT PROBLEMS WERE ENCOUNTERED.

VIII PAD DAMAGE

PAD DAMAGE WAS NORMAL AND THE PAD TURNAROUND SCHEDULE CAN BE MAINTAINED.

[redacted]

SYMBOL [redacted] | PAGE NR 7 | NR OF PAGES 7 | SECURITY CLASSIFICATION [redacted] | INITIALS

DD FORM 1 MAY 65 173-1

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